

What is Claimed is:

1. A method for communicating in a point to multi-point digital subscriber line (DSL) network, comprising the steps of:
 - electrically connecting a local loop to customer premises wiring;
 - establishing intra-LAN computer communications among a plurality of computers located at the customer premises, over the customer premises wiring, in a LAN frequency band, wherein one of the plurality of computers is configured as a Master computer and the remaining computers are configured as Slave computers;
 - establishing a WAN communications link between the Master computer located at the customer premises and a line card located at a central office, across the local loop, wherein communications between the Master computer and the central office occur in a WAN frequency band;
 - directing outgoing WAN communications from any of the Slave computers to the WAN communications link, via the Master computer; and
 - receiving incoming WAN communications directly at any of the Slave computers.
2. The method as defined in claim 1, wherein the step of directing outgoing WAN communications further includes communicating outgoing communications from a Slave computer to the Master computer using a LAN frequency band.

3. The method as defined in claim 2, wherein the LAN frequency band is located at a higher than range that the WAN frequency band.

4. The method as defined in claim 1, wherein the WAN frequency band is a DSL frequency band.

5. The method as defined in claim 1, wherein the WAN frequency band more specifically comprises an upstream frequency band and a downstream frequency band.

6. The method as defined in claim 5, wherein the step of receiving incoming WAN communications includes monitoring, by the Slave computers, communications over the customer premises wiring within the downstream frequency band.

7. A communication circuit for equipping a computer to communicate over both a LAN and a WAN comprising:

WAN communication circuitry for generating signals for communication over the WAN in accordance with a predetermined transmission frequency and protocol;

LAN communication circuitry for generating signals for intra-LAN communication, the LAN communication circuitry configured to generate a signal that is transmitted in a frequency band that exceeds the highest transmission frequency of signals communicated over the WAN;

first logic configured to direct outbound WAN communications through another computer on the LAN, communicating these communications through the another computer within a LAN frequency band; and

second logic configured to monitor inbound WAN communications and receive directly inbound WAN communications destined for the computer.

8. The system as defined in claim 7, further including:

- third logic, operable upon a reset condition, configured to determine whether any other computer is presently in communication with the LAN;
- fourth logic configured to establish WAN communications from the computer within a WAN frequency band, if the third logic indicates that no other computer is presently in communication with the LAN;

9. In a computer having both WAN and LAN communication circuitry, wherein WAN communication circuitry generates signals for communication over a WAN in accordance with a WAN frequency and protocol and LAN communication circuitry generates signals for intra-LAN communication in accordance with a LAN frequency and protocol, a method for configuring a computer to communicate over both a LAN and a WAN comprising the steps of:

detecting whether another at least one other computer is communicating with the LAN;

configuring the computer as a Slave computer on the LAN, if at least one other computer is detected as being in communication with the LAN;

communicating all outbound WAN communications through a Master computer, using the LAN frequency to communicate the outbound communications from the Slave computer to the Master computer;

monitoring communications over the LAN within the WAN frequency band for communications destined for the Slave computer; and

receiving appropriate inbound WAN communications directly.

10. The method as defined in claim 9, wherein the LAN frequency band is located at a higher than range that the WAN frequency band.

11. The method as defined in claim 9, wherein the WAN frequency band is a DSL frequency band.

12. The method as defined in claim 9, wherein the WAN frequency band more specifically comprises an upstream frequency band and a downstream frequency band.